Stratus ftServer 6310 System

ftServer systems are for organizations with mission-critical applications that must always be protected against downtime and data loss.

The fifth generation Stratus® ftServer® 6310 system is the industry's first fault-tolerant hex-core server based on the Intel® QuickPath Architecture. Built expressly to handle the most demanding workloads with ease, the top-of-the-line 6310 model delivers two to three times the performance of previous generation systems.

And, as you've come to expect from Stratus, the 6310 system delivers greater than 99.999% uptime for Microsoft® Windows Server®, Red Hat Enterprise Linux® and VMware® vSphere™ operating environments.

Powered by two high-performance, hex-core Intel® Xeon® processors, the 6310 system achieves outstanding levels of processing power through the use of integrated memory controllers, hyper-threading technology and high-speed interconnects for connecting processors and other components. These no compromise features make it the perfect choice for enterprise-class applications or transaction-intensive data center solutions. Such environments include server virtualization, database engine, electronic funds transfer, online banking, electronic medical records, supply chain, cloud computing and enterprise resource planning.

The scalable, modular design of the ftServer 6310 system combines maximum space efficiency and reliability with serviceability features not found in alternative solutions. These physical design improvements are further enhanced by the availability, performance, and security features offered by the operating systems.

Uptime assurance features

Like other members of the industry-standard ftServer family, the ftServer 6310 system comes complete with Stratus uptime assurance features that eliminate operational complexity and high costs inherent in clusters. Your enterprise gains superior uptime protection without having to modify applications — and without the need for failover scripting, repeated test procedures, or extra effort to make applications cluster-aware.

Fault-tolerant ftServer systems protect mission-critical applications against downtime and data loss.

Lockstep hardware technology

Replicated, fault-tolerant hardware components process the same instructions at the same time. In the event of a component malfunction, processing doesn't miss a beat. The redundant component acts as an active spare that continues normal operations without system downtime or data loss. But that's just one of the major difference between ftServer systems and conventional servers.

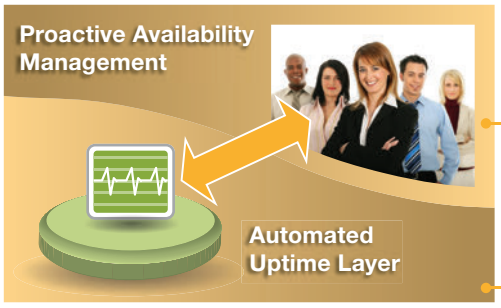
The ftServer architecture separates PCI I/O from the rest of the motherboard and adds hardware logic in the form of custom Stratus chipsets. These chipsets provide the essential foundation for lockstep processing and the ability to detect, isolate, and withstand faults. Lockstep operation allows the ftServer system to isolate any hardware failure without any degradation in performance.

Automated Uptime layer

The Automated Uptime™ Layer presents and manages the replicated ftServer components as a single system. This dramatically reduces complexity and operator error. Conventional technologies like clusters require you to synchronize state information between the nodes and between all the layers of multi-tiered applications such as the Web layer, middleware, and back-end database.

Working in concert with lockstep technology, the Automated Uptime Layer prevents many errors from escalating into outages. Even in-memory data is constantly protected and maintained. Other issues are captured, analyzed, and reported to Stratus. This allows support personnel to take a proactive approach to correcting software problems before they recur.

Stratus uptime assurance keeps critical operations available all the time.



24/7 monitoring: people / practices

Detects, isolates, and resolves issues before they cause downtime

Lockstep hardware withstands faults that would cause other servers to crash

ftServer systems combine purpose-built fault-tolerant hardware, Automated Uptime Layer software, and proactive availability management services for complete uptime assurance.

Stratus ftServer™

Uptime. **All the time.**

Stratus uptime assurance. Automatic availability that exceeds 99.999%.

Stratus provides a single source of accountability for complex inter-related platform, system software, and operating system support issues.

If needed, the ftServer system automatically orders the *correct* customer-replaceable part and resynchronizes upon installation. Stratus device driver hardening adds yet another level of reliability to the operating environment.

Proactive availability management

Stratus support technicians monitor your system over our secure global ActiveService™ Network (ASN). Leveraging information provided by the automated uptime layer, these experts are at the ready 24/7 to remotely diagnose and remediate more complex issues.

The Automated Uptime Layer reports a depth and frequency of diagnostic information that is unmatched in the industry. Authorized Stratus support engineers use this data to determine the root cause of issues related to the hardware or operating environment.

Remote support capabilities — made possible by the global Stratus ActiveService™ Network — enable our service engineers to diagnose, troubleshoot, and resolve problems online as if they were onsite.

Stratus' extensive online knowledgebase is a repository that tracks events across the entire installed base of systems. This enables us to identify and take remedial action on trends and defects before they pose problems. We also use this data to improve future product and service capabilities.

Stratus' uptime assurance features translate into tangible financial advantages that any business can appreciate: industry-leading uptime, plug-and-play deployment and simplified management and support.

Fault-tolerant ftScalable™ storage enables common storage management.

The ftScalable storage solution from Stratus packs innovative availability into an economical, scalable, 2U powerhouse. This high-performance, modular array addresses dedicated, shared and networked storage environments — allowing your to dynamically configure and grow your system as quickly as the needs of your business dictate.

Like other members of our ftServer product family, the fault-tolerant ftScalable solution is designed for continuous availability. Redundant components, integrated automatic controller failover, and hot standby features combine with multi-path IO support to ensure maximum data integrity and protection.

Stratus ftScalable storage offers dynamic capacity expansion of up to three shelves.

Stratus ftServer 6310 System

The Stratus 6310 top-of-the-line server excels in applications that demand higher I/O throughput and in settings with growing or unpredictable workloads.

ftServer 6310 system specifications

PROCESSORS	
Logical processors	2-sockets per customer replaceable unit (CRU)
Processor	Intel® Xeon® processor X5670, 2.93 GHz
Cores	6 per processor
L2 cache	12 MB per processor
Intel QPI speed	6.4 GT/s
Maximum memory bandwidth	64 GB/s
Advanced technology	Intel Hyper-Threading technology
MEMORY	
Min/max memory	8 GB/96 GB DDR3
DIMM slots	24 (12 per CRU)
I/O SUBSYSTEM	
Integrated PCI adapter slots	4 PCI-Express (2 per CRU)
Optional PCI-adapter slots	4 PCI-Express (Gen 2)
STORAGE SUBSYSTEM	
Internal system drive bays	16 SAS 2.5” (8 per CRU)
Internal SAS disk drives supported	15K (146 GB, 300 GB); 7.2K (1 TB)
ftSCALABLE STORAGE SUBSYSTEM	
Expansion drive slots (RAID)	72
RAID levels	0, 1, 3, 5, 6, 10, 50
Drive types	SFF SAS: SSD and HDD (15K, 7.2K RPM)
EMBEDDED I/O	
10/100/1000 Ethernet ports	4 (2 per CRU)
10/100 Management Ethernet ports	2 (1 per CRU)
DVD-R/W	1
Serial (com) ports	2 (9-pin ports per system)
USB ports	4 (3 on rear, 1 on front per system)
MANAGEABILITY	
Baseboard management controller	standard
Virtual Technician Module (VTM)	standard
Graphics adapter	1 VGA port per system
ActiveService modem	1 on rear panel (optional)
PCI ADAPTERS	
1 Gigabit dual-port Ethernet	up to 8 optional (4 per CRU)
10 Gigabit Ethernet server adapter	up to 4 optional (2 per CRU)
SAS 8-port host bus adapter for tape	up to 1 optional (non-redundant)
Fibre Channel for external storage	up to 4 optional (2 per CRU)
SERVICEABILITY	
Hot-swappable components	CPU / I/O module, disks
OPERATING SYSTEM	
Microsoft	Windows Server 2008 R2 with Hyper-V™ virtualization
Red Hat	Red Hat Enterprise Linux 5 and 6
VMware	vSphere 4 and 5
POWER AND PACKAGING	
Input voltage	Rack: 100-127, 200-240 VAC; 50 Hz, 60 Hz
Rack system dimension (H x W x D)	7.0” (4U) x 17.5” x 30.1” with bezel and modem
Weight (fully loaded including rails)	Rack: 54.43 kg (120 lbs.)

Stratus 24x7™

intel Xeon inside® Powerful. Intelligent.

Specifications and descriptions are summary in nature and subject to change without notice.

Stratus® Technologies

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